| ICOOS Act of 2009  | Coastal Ocean Observations and Research Act (COORA) of 2020  |  |
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| Subtitle C-Integrated Coastal and Ocean Observation System Act of 2009   | STATE OF THE STATE |  |
| SEC. 12301. SHORT TITLE.   |  |  |
| This subtitle may be cited as the `Integrated Coastal and Ocean Observation System Act of 2009'.   |  |  |
| 2009'.<br>SEC. 12302. PURPOSES.  |  |  |
| The purposes of this subtitle are to-  |  |  |
| (1) establish a national integrated System of ocean, coastal, and Great Lakes observing  |  |  |
| systems, comprised of Federal and non-Federal components coordinated at the national level by the National Ocean Research Leadership Council and at the regional level by a network of regional information contination entities, and that includes in situ, remote, and other coastal and ocean observation, technologies, and data management and communication systems, and is designed to address regional and national needs for ocean information, to gather specific data on key coastal, ocean, and Great Lakes variables, and to ensure timely and sustained dissemination and availability of these data to- | "(1) to establish and sustain a national integrated System of ocean, coastal, and Great Lakes observing systems, comprised of Federal and non-Federal components coordinated at the national level by the Council and at the regional level by a network of regional coastal observing systems, and that in-cludes in situ, remote, and other coastal and ocean observation and modeling capabilities, technologies, data management systems, communication systems, and product development systems, and is designed to address regional and national needs for ocean and coastal information, to gather specific data on key coastal, ocean, and Great Lakes variables, and to en-sure timely and sustained dissemination and avail-ability of these data—   |  |
| (A) support national defense, marine commerce, navigation safety, weather, climate, and  | (A) to the public;   |  |
| marine forecasting, energy siting and production, economic development, ecosystem-based marine, coastal, and Great Lakes resource management, public safety, and public outreach training and education;   | (B) to support national defense, search and rescue operations, marine commerce, navigation safety, weather, climate, and marine forecasting, energy siting and production, eco-nomic development, ecosystem-based marine, coastal, and Great Lakes resource management, public safety, and public outreach and edu-cation;   |  |
| (B) promote greater public awareness and stewardship of the Nation's ocean, coastal, and Great Lakes resources and the general public welfare; and   | (C) to promote greater public awareness and stewardship of the Nation's ocean, coastal, and Great Lakes resources and the general public welfare;  |  |
|  | (D) to provide easy access to ocean, coastal, and Great Lakes data and promote data sharing between Federal and non-Federal sources;   |  |
| (C) enable advances in scientific understanding to support the sustainable use, conservation, management, and understanding of healthy ocean, coastal, and Great Lakes resources;  | (E) to enable advances in scientific understanding to support the sustainable use, con-servation, management, and understanding of healthy ocean, coastal, and Great Lakes resources to ensure the Nation can respond to opportunities to enhance food, economic, and national security, and   |  |
|  | (F) to monitor and model changes in the oceans and Great Lakes, including with respect to chemistry, harmful algal blooms, hypoxia, water levels, and other phenomena;   |  |
| (2) improve the Nation's capability to measure, track, explain, and predict events related directly and indirectly to weather and climate change, natural climate variability, and interactions between the oceanic and atmospheric environments, including the Great Lakes; and   |  |  |
|  | (3) to sustain, upgrade, and modernize the Nation's ocean and Great Lakes observing infrastructure to detect changes and ensure delivery of reliable and timely information; and   |  |
| (3) authorize activities to promote basic and applied research to develop, test, and deploy innovations and improvements in coastal and ocean observation technologies, modeling systems, and other scientific and technological capabilities to improve our conceptual understanding of weather and climate, ocean-atmosphere dynamics, global climate change, physical, chemical, and biological dynamics of the ocean, coastal and Great Lakes environments, and to conserve healthy and restore degraded coastal ecosystems.   | (4) to authorize activities— (A) to promote basic and applied research to develop, test, and deploy innovations and im-provements in coastal and ocean observation technologies, including advanced observing technologies, modeling systems, other scientific and technological capabilities to improve the understanding of weather and climate, ocean-atmosphere dynamics, global climate change, and the physical, chemical, and biological dynamics of the ocean, coastal and Great Lakes environments; and (B) to conserve healthy and restore degraded coastal ecosystems.  |  |
| SEC. 12303. DEFINITIONS.   |  |  |
| In this subtitle:  |  |  |
| (1) ADMINISTRATOR- The term 'Administrator' means the Under Secretary of Commerce for Oceans and Atmosphere in the Under Secretary's capacity as Administrator of the National Oceanic and Atmospheric Administration.   |  |  |
| (2) COUNCIL- The term `Council' means the National Ocean Research Leadership Council established by section 7902 of title 10, United States Code.  | (2) COUNCIL- The term 'Council' means the National Ocean Research Leadership Council established by section 8932 of title 10, United States Code.  |  |
| (3) FEDERAL ASSETS- The term 'Federal assets' means all relevant non-classified civilian<br>coastal and ocean observations, technologies, and related modeling, research, data<br>management, basic and applied technology research and development, and public education<br>and outreach programs, that are managed by member agencies of the Council.  |  |  |
| $\label{lem:committee} \begin{tabular}{ll} (4) INTERAGENCY OCEAN OBSERVATION COMMITTEE- The term `Interagency Ocean Observation Committee' means the committee established under section 12304(c)(2). \end{tabular}$   |  |  |
| (5) NON-FEDERAL ASSETS- The term`non-Federal assets' means all relevant coastal and ocean observation technologies, related basic and applied technology research and development, and public education and outreach programs that are integrated into the System and are managed through States, regional organizations, universities, nongovernmental organizations, or the private sector.  | (5) NON-FEDERAL ASSETS- The term 'non-Federal assets' means all relevant coastal and ocean<br>observation technologies, related basic and applied technology research and development, and public<br>education and outreach programs that are managed through States, regional organizations, universities,<br>nongovernmental organizations, or the private sector and integrated into the system by the regional coastal<br>observing systems, the National Oceanic and Atmospheric Administration, or the agencies on the<br>Interagency Ocean Observing Committee.   |  |
| (6) REGIONAL INFORMATION COORDINATION ENTITIES-  | (6) REGIONAL COASTAL OBSERVING SYSTEM  |  |
| (A) IN GENERAL- The term 'regional information coordination entity' means an organizational body that is certified or established by contract or memorandum by the lead Federal agency designated in section 12304(c)(3) of this subtitle and coordinates State, Federal, local, and private interests at a regional level with the responsibility of engaging the private and public sectors in designing, operating, and improving regional coastal and ocean observing systems in order to ensure the provision of data and information that meet the needs of user groups from the respective regions.             | —The term 'regional coastal observing system' means an organizational body that is certified or established by contract or memorandum by the lead Federal agency designated in section 12304(c)(3) and coordinates State, Federal, local, tribal, and private interests at a regional level with the responsibility of engaging the private and public sectors in designing, operating, and improving regional coastal and ocean observing systems in order to ensure the provision of data and information that meet the needs of user groups from the respective regions."; and  |  |
| $\label{lem:condition} (B) CERTAIN INCLUDED ASSOCIATIONS- The term `regional information coordination entity' includes regional associations described in the System Plan.$  |  |  |
| (7) SECRETARY- The term 'Secretary' means the Secretary of Commerce, acting through the National Oceanic and Atmospheric Administration.   | (7) SECRETARY- The term 'Secretary' means the Secretary of Commerce, acting through the<br>Administrator.  |  |
| (8) SYSTEM- The term 'System' means the National Integrated Coastal and Ocean Observation System established under section 12304.  |  |  |
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| (9) SYSTEM PLAN: The term "System Plan" means the plan contained in the document entitle<br>"Ocean. US Publication No. 9, The First Integrated Ocean Observing System (IOOS)<br>Development Plan; as updated by the Council under this subtitle.  | a l   |  |
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| SEC. 12304. INTEGRATED COASTAL AND OCEAN OBSERVING SYSTEM.  |   |  |
| (a) Establishment-The President, acting through the Council, shall establish a National   |   |  |
| Integrated Coastal and Ocean Observation System to fulfill the purposes set forth in section 12302 of this subtitle and the System Plan and to fulfill the Nation's international obligations to contribute to the Global Earth Observation System of Systems and the Global Ocean Observing System.  |   |  |
| (b) System Elements-  |   |  |
| $\begin{tabular}{ll} (1) IN GENERAL- In order to fulfill the purposes of this subtitle, the System shall be national in scope and consist of-\\ \end{tabular}$  | 1) IN GENERAL.—In order to fulfill the purposes of this subtitle, the System shall be national in scope and consist of—   |  |
| (A) Federal assets to fulfill national and international observation missions and priorities;   | "(A) Federal assets to fulfill national and international observation missions and prior- ities;  |  |
| (B) non-Federal assets, including a network of regional information coordination entities identified under subsection (c)(4), to fulfill regional observation missions and priorities;  | "(B) non-Federal assets, including a network of regional coastal observing systems identified under subsection (c) (4), to fulfill regional and national observation missions and priorities;   |  |
| (C) data management, communication, and modeling systems for the timely integration and dissemination of data and information products from the System;   | "(C) observing, modeling, data manageent, and communication systems for the timey integration and dissemination of data and information products from the System, including reviews of data collection procedures across regions and programs to make recommendations for data collection standards across the System to meet national ocean, coastal, and Great Lakes observation, applied research, and weather forecasting needs;  |  |
|   | "(D) a product development system to transform observations into products in a format that may be readily used and understood; and  |  |
| (D) a research and development program conducted under the guidance of the Council, consisting of-  | "(E) a research and development program conducted under the guidance of the Council, consisting of—   |  |
| (i) basic and applied research and technology development to improve understanding of<br>coastal and ocean systems and their relationships to human activities and to ensure<br>improvement of operational assets and products, including related infrastructure, observing<br>technologies, and information and data processing and management technologies; and   | "(i) basic and applied research and technology development— "(i) to improve understanding of coastal and ocean<br>systems and their relationships to human activities; and "(ii) to ensure improvement of operational assets and<br>products, including related infrastructure, observing technologies, and information and data processing and<br>management technologies;   |  |
| (ii) large scale computing resources and research to advance modeling of coastal and ocean processes.   | (ii) an advanced observing technology development prgram to fill gaps in technology;  |  |
|   | (iii) large scale computing resources and research to advance modeling of coastal, ocean, and Great Lakes processes;  |  |
|   | (iv) models to improve regional weather forecasting capabilities and regional weather forecasting products; and   |  |
|   | "(v) reviews of data collection procedures across regions and programs to make recommendations for data collection standards across the System to meet national ocean, coastal, and Great Lakes observation, applied research, and weather forecasting needs.   |  |
| (2) ENHANCING ADMINISTRATION AND MANAGEMENT- The head of each Federal agency that has administrative jurisdiction over a Federal asset shall support the purposes of this subtitle and may take appropriate actions to enhance internal agency administration and management to better support, integrate, finance, and utilize observation data, products, and services developed under this section to further its own agency mission and responsibilities.   |   |  |
| (3) AVAILABILITY OF DATA- The head of each Federal agency that has administrative jurisdiction over a Federal asset shall make available data that are produced by that asset and that are not otherwise restricted for integration, management, and dissemination by the System.   | (3) AVAILABILITY OF DATA- The head of each Federal agency that has administrative jurisdiction<br>over a Federal asset shall make available data that are produced by that asset and that are not otherwise<br>restricted for integration, management, and dissemination by the System for use in the development of<br>products to address societal needs.   |  |
| (4) NON-FEDERAL ASSETS- Non-Federal assets shall be coordinated, as appropriate, by the Interagency Ocean Observing Committee or by regional information coordination entities.   | (4) COORDINATION OF NON-FEDERAL ASSETS- Non-Federal assets shall be coordinated, as appropriate, by the Interagency Ocean Observing Committee or by the regional coastal observing system   |  |
| (c) Policy Oversight, Administration, and Regional Coordination-  |   |  |
| (1) COUNCIL FUNCTIONS- The Council shall serve as the policy and coordination oversight body for all aspects of the System. In carrying out its responsibilities under this subtitle, the Council shall-  |   |  |
| (A) approve and adopt comprehensive System budgets developed and maintained by the<br>Interagency Ocean Observation Committee to support System operations, including<br>operations of both Federal and non-Federal assets;   |   |  |
| (B) ensure coordination of the System with other domestic and international earth observing activities including the Global Ocean Observing System and the Global Earth Observing System of Systems, and provide, as appropriate, support for and representation on United States delegations to international meetings on coastal and ocean observing programs; and  |   |  |
| (C) encourage coordinated intramural and extramural research and technology development, and a process to transition developing technology and methods into operations of the System  |   |  |
| $\begin{tabular}{ll} (2) INTERAGENCY OCEAN OBSERVATION COMMITTEE- The Council shall establish or designate an Interagency Ocean Observation Committee which shall—\\ \end{tabular}$   | (2) INTERAGENCY OCEAN OBSERVATION COMMITTEE.— (A) ESTABLISHMENT—The Council shall establish or designate a committee, which shall be known as the Interagency Ocean Observation Committee which shall—(B) DUTIES—The Interagency Ocean Observation Committee shall—   |  |
| (A) prepare annual and long-term plans for consideration and approval by the Council for the integrated design, operation, maintenance, enhancement and expansion of the System to mee the objectives of this subtitle and the System Plan;   |   |  |
| (B) develop and transmit to Congress at the time of submission of the President's annual budget request an annual coordinated, comprehensive budget to operate all elements of the System identified in subsection (b), and to ensure continuity of data streams from Federal and non-Federal assets;   | (ii) develop and transmit to Congress, along with the budget submitted by the President to Congress pursuant to section 1105(a) of title 31, United Stated Code, an annual coordinated, comprehensive budget – (i) to operate all elements of the System identified in subsection (b), and (II) to ensure continuity of data streams from Federal and non-Federal assets;   |  |
|   | (iii) establish required requirements for observation data variables to be gathered by both Federal and non-  |  |
| (C) establish required observation data variables to be gathered by both Federal and non-<br>Federal assets and identify, in consultation with regional information coordination entities,<br>priorities for System observations;   | Federal assets and identify, in consultation with regional coastal observing systems, priorities for System observations;   |  |
| designate an Interagency Ocean Observation Committee which shall— (A) prepare annual and long-term plans for consideration and approval by the Council for the integrated design, operation, maintenance, enhancement and expansion of the System to meet the objectives of this subtitle and the System Plan;  (B) develop and transmit to Congress at the time of submission of the President's annual budget request an annual coordinated, comprehensive budget to operate all elements of the System identified in subsection (b), and to ensure continuity of data streams from Federal and non-Federal assets; | or designate a committee, which shall be known as the Interagency Ocean Observation Committee which shall— (B) DUTIES—The Interagency Ocean Observation Committee shall— (i) prepare annual and long-term plans for consideration and approval by the Council for the integrated design, operate ation, maintenance, enhancement, and ex- pansion of the System to meet the objectives of this subtitle and the System Plan; (ii) develop and transmit to Congress, along with the budget submitted by the President to Congress pursuant to section 1105(a) of title 31, United Stated Code, an annual coordinated, comprehensive budget— (i) to operate all elements of the System identified in subsection (b), and (II) to ensure continuity of data streams from Federal and non-Federal assets; |  |

| (E) develop contract certification standards and compliance procedures for all non-Federal assets, including regional information coordination entities, to establish eligibility for integration into the System and to ensure compliance with all applicable standards and protocols established by the Council, and ensure that regional observations are integrated into   | (v) develop contract requirements for each regional coastal observing system— (I) to establish eligibility for integration into the System; (II) to ensure compiliance with all applicable standards and protocols established by the   |  |  |
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| the System on a sustained basis;   | Council; and (III) to ensure that regional ob- servations are integrated into the Sys- tem on a sustained basis;  |  |  |
| <ul><li>(F) identify gaps in observation coverage or needs for capital improvements of both Federal<br/>assets and non-Federal assets;</li></ul>   | <ul><li>(vi) identify gaps in observation cov- erage or needs for capital improvements of both Federal assets and non-<br/>Federal as- sets;</li></ul>  |  |  |
| (G) subject to the availability of appropriations, establish through one or more participating<br>Federal agencies, in consultation with the System advisory committee established under<br>subsection (d), a competitive matching grant or other programs—  | (vii) subject to the availability of ap- propriations, establish through 1 or more Federal agencies participating in the<br>Inter-agency Ocean Observation Committee, in consultation with the System advisory com- mittee established<br>under subsection (d.) a competitive matching grant or other pro- grams—   |  |  |
| (i) to promote intramural and extramural research and development of new, innovative, and emerging observation technologies including testing and field trials; and  | (I) to promote intramural and extramural research and development of new, innovative, and emerging ob- servation technologies including test- ing and field trials; and   |  |  |
| (ii) to facilitate the migration of new, innovative, and emerging scientific and technological advances from research and development to operational deployment;   | (II) to facilitate the migration of new, innovative, and emerging scientific and technological advances from research and development to operational deployment;  |  |  |
| (H) periodically review and recommend to the Council, in consultation with the Administrator, revisions to the System Plan;  | (viii) periodically— (I) review the System Plan; and (II) submit to the Council such recommendations as the Interagency Ocean Observation Committee may have for improvements to the System Plan;   |  |  |
| (I) ensure collaboration among Federal agencies participating in the activities of the Committee; and  | (ix) ensure collaboration among Federal agencies participating in the Interagency Ocean Observation Committee; and  |  |  |
| (J) perform such additional duties as the Council may delegate.  | (x) perform such additional duties as the Council may delegate  |  |  |
| (3) LEAD FEDERAL AGENCY-The National Oceanic and Atmospheric Administration shall function as the lead Federal agency for the implementation and administration of the System, in consultation with the Council, the Interagency Ocean Observation Committee, other Federal agencies that maintain portions of the System, and the regional information coordination entities, and shall-  | "(3) LEAD FEDERAL AGENCY.— (A) IN GENERAL.—The National Oceanic and Atmospheric Administration shall function as the lead Federal agency for the implementation and administration of the System.   |  |  |
|  | (B) CONSULTATION REQUIRED.—In carrying out this paragraph, the Administrator shall consult with the Council,<br>the Interagency Ocean Observation Committee, other Federal agencies that maintain portions of the System, and<br>the regional coastal observing systems.  |  |  |
| (A) establish an Integrated Ocean Observing Program Office within the National Oceanic and Atmospheric Administration utilizing to the extent necessary, personnel from member agencies participating on the Intergency Ocean Observation Committee, to oversee daily operations and coordination of the System;   | (C) REQUIREMENTS In carrying out this paragraph, the Administrator shall— (i) establish and operate an Integrated Ocean Observing System Program Office within the National Oceanic and Atmospheric Administration that.— (i) utilizes, to the extent necessary, personnel from Federal agencies participating in the Interagency Ocean Observation Committee; and (ii) oversees daily operations and coordination of the System; |  |  |
| (B) implement policies, protocols, and standards approved by the Council and delegated by the Interagency Ocean Observing Committee;   | (ii) implement policies, protocols, and standards approved by the Council and delegated by the Interagency Ocean Observing Committee;   |  |  |
| (C) promulgate program guidelines to certify and integrate non-Federal assets, including regional information coordination entities, into the System to provide regional coastal and ocean observation data that meet the needs of user groups from the respective regions;  | (iii) promulgate program guidelines— (i) to certify and integrate regional associations into the System; and (ii) to provide regional coastal and ocean observation data that meet the needs of user groups from the respective regions;  |  |  |
| (D) have the authority to enter into and oversee contracts, leases, grants or cooperative agreements with non-Federal assets, including regional information coordination entities, to support the purposes of this subtitle on such terms as the Administrator deems appropriate;   | (iv) have the authority to enter into and oversee contracts, leases, grants or cooperative agreements with non-<br>Federal assets, including regional coastal observing systems, to support the purposes of this subtitle on such terms<br>as the Administrator deems appropriate;  |  |  |
| (E) implement merit-based, competitive funding process to support non-Federal assets, including the development and maintenance of a network of regional information coordination entities, and develop and implement a process for the periodic review and evaluation of all non-Federal assets, including regional information coordination entities;  | (v) implement and maintain a merit-based, competitive funding process to support non-Federal assets, including the development and maintenance of a national network of regional coastal observing systems, and develop and implement a process for the periodic review and evaluation of the regional associations;  |  |  |
| (F) provide opportunities for competitive contracts and grants for demonstration projects to design, develop, integrate, deploy, and support components of the System;   | (vi) provide opportunities for competitive contracts and grants for demonstration projects to design, develop,<br>integrate, deploy, maintain, and support components of the System;  |  |  |
| (G) establish efficient and effective administrative procedures for allocation of funds among contractors, grantees, and non-Federal assets, including regional information coordination entities in a timely manner, and contingent on appropriations according to the budget adopted   | (vii) establish and maintain efficient and effective administrative procedures for the timely allocation of funds among   |  |  |
| by the Council; (H) develop and implement a process for the periodic review and evaluation of regional   | contractors, grantees, and non-Federal assets, including regional coastal observing systems   |  |  |
| information coordination entities;   | <ul> <li>(viii) develop and implement a process for the periodic review and evaluation of the regional coastal observing<br/>systems;</li> </ul>  |  |  |
| (I) formulate an annual process by which gaps in observation coverage or needs for capital improvements of Federal assets and non-Federal assets of the System are identified by the regional information coordination entities, the Administrator, or other members of the System and transmitted to the Interagency Ocean Observing Committee;   | (ix) formulate an annual process by which gaps in observation coverage or needs for capital improvements of Federal assets and non-Federal assets of the System are— (I) identified by the regional associations described in the System Plan, the Administrator, or other members of the System; and (II) submitted to the Interagency Ocean Observation Committee;  |  |  |
| (J) develop and be responsible for a data management and communication system, in accordance with standards and protocols established by the Council, by which all data collected by the System regarding ocean and coastal waters of the United States including the Great Lakes, are processed, stored, integrated, and made available to all end-user communities;  | (x) develop and be responsible for a data management and communication system, in accordance with standards<br>and protocols established by the Interagency Ocean Observation Committee, by which all data collected by the<br>System regarding ocean and coastal waters of the United States including the Great Lakes, are processed, stored,<br>integrated, and made available to all end-user communities;                    |  |  |
| (K) implement a program of public education and outreach to improve public awareness of global climate change and effects on the ocean, coastal, and Great Lakes environment;  | STRIKE OUT  |  |  |
| (L) report annually to the Interagency Ocean Observing Committee on the accomplishments, operational needs, and performance of the System to contribute to the annual and long-term plans developed pursuant to subsection (c)(2)(A)(i); and   | (xi) not less frequently than once each year, submit to the Interagency Ocean Observation Committee a report on the accomplishments, operational needs, and performance of the System to contribute to the annual and long-term plans prepared pursuant to paragraph (2)(E)(E)  |  |  |
| (M) develop a plan to efficiently integrate into the System new, innovative, or emerging technologies that have been demonstrated to be useful to the System and which will fulfill the purposes of this subtitle and the System Plan.   | (xii) develop and periodically update a plan to efficiently integrate into the System new, innovative, or emerging technologies that have been demonstrated to be useful to the System and which will fulfill the purposes of this subtitle and the System Plan, and  |  |  |
| A DECIDIO DE LA CONTRACTOR DE LA CONTRAC | "(xiii) work with users and regional associations to develop products to enable real-lime data sharing for decision makers, including with respect to weather forecasting and modeling, search and rescue operations, corrosive seawater forecasts, water quality monitoring and communication, and harmful algal bloom forecasting.  |  |  |
| (4) REGIONAL INFORMATION COORDINATION ENTITIES-  | (4) REGIONAL COASTAL OBSERVING SYSTEMS  |  |  |

| (A) IN GENERAL- To be certified or established under this subtitle, a regional information coordination entity shall be certified or established by contract or agreement by the Administrator, and shall agree to meet the certification standards and compliance procedure guidelines issued by the Administrator and information needs of user groups in the region while adhering to national standards and shall-                    | (A) IN GENERAL.—A regional coastal observing system described in the System Plan as a regional association may not be certified or established under this subtile unless it.—(i) has been or shall be certified or established by contract or agreement by the Administrator; (ii) meets—(i) the certification standards and compliance procedure guidelines issued by the Administrator; and (ii) the information needs of user groups in the region while adhering to national standards;    |  |
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| (i) demonstrate an organizational structure capable of gathering required System observation<br>data, supporting and integrating all aspects of coastal and ocean observing and information<br>programs within a region and that reflects the needs of State and local governments,<br>commercial interests, and other users and beneficiaries of the System and other requirements<br>specified under this subtitle and the System Plan; | (iii) demonstrates an organizational structure, that under the funding limitations is capable of— (I) gathering required System observation data; (II) supporting and integrating all aspects of coastal and ocean observing and information programs within a region; and (III) reflecting the needs of State, local, and tribal governments, commercial interests, and other users and beneficiaries of the System and other rewuirements specified under this subtitle and the System Plan; |  |
| (ii) identify gaps in observation coverage needs for capital improvements of Federal assets and non-Federal assets of the System, or other recommendations to assist in the development of the annual and long-term plans created pursuant to subsection (c)(2)(A)(i) and transmit such information to the Interagency Ocean Observing Committee via the Program Office;  | "(iv) identifies— (I) gaps in observation coverage needs for capital improvements of Federal assets and non-Federal assets of the System; and (II) other recommendations to assist in the development of the annual and long-term plans prepared pursuant to paragraph (2)(B)() and transmits such information to the Interagency Ocean Observation Committee through the Program Office established under paragraph (3)(C)(i);  |  |
| (iii) develop and operate under a strategic operational plan that will ensure the efficient and effective administration of programs and assets to support daily data observations for integration into the System, pursuant to the standards approved by the Council;  | (III) develops and operates under a strategic plan that will ensure the efficient and effective administration of programs and assets to support daily data observations for integration into the System, pursuant to the standards approved by the Council;   |  |
| (iv) work cooperatively with governmental and non-governmental entities at all levels to<br>identify and provide information products of the System for multiple users within the service<br>area of the regional information coordination entities; and  | (IV) works cooperatively with governmental and nongovernmental entities at all levels to identify and provide information products of the System for multiple users within the service area of the regional coastal observing system; and  |  |
| (v) comply with all financial oversight requirements established by the Administrator, including requirements relating to audits.   | (V) complies with all financial oversight requirements established by the Administrator, including requirements<br>relating to audits.   |  |
| (B) PARTICIPATION-For the purposes of this subtitle, employees of Federal agencies may participate in the functions of the regional information coordination entities.  | (B) PARTICIPATION.—For the purposes of this subtitle, employees of Federal agencies are permitted to be members of the governing body for the regional coastal observing systems and may participate in the functions of the regional coastal ocean observing systems.   |  |
| (d) System Advisory Committee-  |  |  |
| (1) IN GENERAL- The Administrator shall establish or designate a System advisory committee, which shall provide advice as may be requested by the Administrator or the Interagency Ocean Observing Committee.   | (1) IN GENERAL- The Administrator shall establish or designate a System advisory committee, which shall provide advice as may be requested by the Administrator or the Council under this subtitle   |  |
| (2) PURPOSE- The purpose of the System advisory committee is to advise the Administrator and the Interagency Ocean Observing Committee on-  |  |  |
| (A) administration, operation, management, and maintenance of the System, including integration of Federal and non-Federal assets and data management and communication aspects of the System, and fulfillment of the purposes set forth in section 12302; (B) expansion and periodic modernization and upgrade of technology components of the   | (A) administration, operation, management, and maintenance of the System, including integration of Federal and non-Federal assets and data management and data sharing and communication aspects of the System, and fulfillment of the purposes set forth in section 12302;  |  |
| System; (C) identification of end-user communities, their needs for information provided by the System, and the System's effectiveness in disseminating information to end-user communities and the   |  |  |
| general public; and (D) any other purpose identified by the Administrator or the Interagency Ocean Observing  |  |  |
| Committee.  | "(D) additional priorities, including—   |  |
|   | (i) a national surface current mapping network designed to improve fine scale sea surface mapping using high<br>frequency radar technology and other emerging technologies to address national priorities, including Coast Guard<br>search and rescue operation planning and harmful algal bloom forecasting and detection that—   |  |
|   | (1) is comprised of existing high frequency radar and other sea surface current mapping infrastructure operated by national programs and regional coastal observing systems;   |  |
|   | (II) incorporates new high frequency radar assets or other fine scale sea surface mapping technology assets, and other assets needed to fill gaps in coverage on United States coastlines; and   |  |
|   | (III) follows a deployment plan that prioritizes closing gaps in high frequency radar infrastructure in the United<br>States, stating with areas demonstrating significant sea surface current data needs, especially in areas where<br>additional data will improve Coast Guard search and rescue models;   |  |
|   | (ii) fleet acquisition for unmanned maritime systems for deployment and data integration to fulfill the purposes of this subtitle;   |  |
|   | (iii) an integrative survey program for application of unmanned maritime systems to the real-time or near real-time<br>collection and transmission of sea floor, water column, and sea surface data on biology, chemistry, geology,<br>physics, and hydrography;   |  |
|   | (iv) remote sensing and data assimilation to develop new analytical methodologies to assimilate data from the<br>System into hydrodynamic models;  |  |
|   | (v) integrate multi-State monitoring to assess sources, movement, and fate of sediments in coastal regions;  |  |
|   | (iv) a multi-region marine sound monitoring system to be— (i) planned in consultation with the Interagency Ocean<br>Observation Committee, the National Oceanic and Atmospheric Administration, the Department of the Nay, and<br>academic research institutions; and (ii) developed, installed, and operated in coordination with the National Oceanic<br>and Atmospheric Administration, the Department of the Navy, and academic research institutions; and                                 |  |
|   | (E) any other purpose identified by the Administrator or the Council.  |  |
| (3) MEMBERS-  |  |  |
| (A) IN GENERAL- The System advisory committee shall be composed of members appointed by the Administrator. Members shall be qualified by education, training, and experience to evaluate scientific and technical information related to the design, operation, maintenance, or use of the System, or use of data products provided through the System.   | (A) IN GENERAL- The System advisory committee shall be composed of members appointed by the Administrator. The Administrator may stagger the terms of the System advisory committee members. Members shall be qualified by education, training, and experience to evaluate scientific and technical information related to the design, operation, maintenance, or use of the System, or use of data products provided through the System.  |  |
| (B) TERMS OF SERVICE- Members shall be appointed for 3-year terms, renewable once. A vacancy appointment shall be for the remainder of the unexpired term of the vacancy, and an individual so appointed may subsequently be appointed for 2 full 3-year terms if the remainder of the unexpired term is less than 1 year.  | (B) TERMS OF SERVICE- The Administrator may stagger the terms of the System advisory committee members. Members shall be appointed for 3-year terms, renewable once. A vacancy appointment shall be for the remainder of the unexpired term of the vacancy, and an individual so appointed may subsequently be appointed for 2 full 3-year terms if the remainder of the unexpired term is less than 1 year.   |  |
| $\label{eq:continuous} \begin{tabular}{ll} (C) CHAIRPERSON- The Administrator shall designate a chairperson from among the members of the System advisory committee. \end{tabular}$   |  |  |
| $\begin{tabular}{ll} (D) APPOINTMENT- Members of the System advisory committee shall be appointed as special Government employees for purposes of section 202(a) of title 18, United States Code. \end{tabular}$  |  |  |
| (4) ADMINISTRATIVE PROVISIONS-  |  |  |

| (A) REPORTING- The System advisory committee shall report to the Administrator and the Interagency Ocean Observing Committee, as appropriate.  |  |  |
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| (B) ADMINISTRATIVE SUPPORT- The Administrator shall provide administrative support to  |  |  |
| the System advisory committee.   |  |  |
| (C) MEETINGS- The System advisory committee shall meet at least once each year, and at other times at the call of the Administrator, the Interagency Ocean Observing Committee, or the chairperson.  |  |  |
| (D) COMPENSATION AND EXPENSES- Members of the System advisory committee shall not be compensated for service on that Committee, but may be allowed travel expenses, including per diem in lieu of subsistence, in accordance with subchapter I of chapter 57 of title 5, United States Code.   |  |  |
| (E) EXPIRATION - Section 14 of the Federal Advisory Committee Act (5 U.S.C. App.) shall not apply to the System advisory committee.  |  |  |
| (e) Civil Liability-For purposes of determining liability arising from the dissemination and use of observation data gathered pursuant to this section, any non-Federal asset or regional information coordination entity incorporated into the System by contract, lease, grant, or cooperative agreement under subsection (c)(3)(D) that is participating in the System shall be considered to be part of the National Oceanic and Atmospheric Administration. Any employee of such a non-Federal asset or regional information coordination entity, while operating within the scope of his or her employment in carrying out the purposes of this subtitle, with respect to tort liability, is deemed to be an employee of the Federal Government. | (e) Civil Liability- For purposes of determining liability arising from the dissemination and use of observation data gathered pursuant to this section, any non-Federal asset or regional information coordination entity incorporated into the System by a memorandum of agreement of certification under subsection (e) (3)(C) (iii) that is participating in the System shall be considered to be part of the National Oceanic and Atmospheric Administration. Any employee of such a non-Federal asset or regional costal ocean observing systems while operating within the scope of his or her employment in carrying out the purposes of this subtitle, with respect to tort liability, is deemed to be an employee of the Federal Government. |  |
| (f) Limitation-Nothing in this subtitle shall be construed to invalidate existing certifications, contracts, or agreements between regional information coordination entities and other elements of the System.  |  |  |
| SEC. 12305. INTERAGENCY FINANCING AND AGREEMENTS.  | SEC. 12305. FINANCING AND AGREEMENTS.  |  |
| (a) In General-To carry out interagency activities under this subtitle, the Secretary of Commerce may execute cooperative agreements, or any other agreements, with, and receive and expend funds made available by, any State or subdivision thereof, any Federal agency, or any public or private organization, or individual.   | "(a) IN GENERAL.—The Secretary of Commerce may execute an agreement on a reimbursable or nonreimbursable basis, with any State or subdivision thereof, any Federal agency, any public or private organization, or any individual to carry out activities under this subtile."  | The text to the left was recommended by DOC GC |
| (b) Reciprocity- Member Departments and agencies of the Council shall have the authority to create, support, and maintain joint centers, and to enter into and perform such contracts, leases, grants, and cooperative agreements as may be necessary to carry out the purposes of this subtitle and fulfillment of the System Plan.   | ogunization, or any manifestation country out according under this section.  | The text to the ER was recommended by Doe of   |
| SEC. 12306. APPLICATION WITH OTHER LAWS.   |  |  |
| Nothing in this subtitle supersedes or limits the authority of any agency to carry out its responsibilities and missions under other laws.  SEC. 12307. REPORT TO CONGRESS.  |  |  |
| (a) Requirement- Not later than 2 years after the date of the enactment of this Act and every 2  |  |  |
| (a) Requirement: Not later than 2 years after the date of the enactment of this Act and every years thereafter, the Administrator shall prepare and the President acting through the Council shall approve and transmit to the Congress a report on progress made in implementing this subtitle.   | "(a) REQUIREMENT.—Not later than March 30, 2020, and every 5 years thereafter, the Administrator shall prepare, and the President acting through the Council shall approve and transmit to Congress, a report on progress made in implementing this subtille.  |  |
| (b) Contents- The report shall include-  | (b) CONTENTS.—Each report required under sub- section (a) shall include—   |  |
| (1) a description of activities carried out under this subtitle and the System Plan;   |  |  |
| (2) an evaluation of the effectiveness of the System, including an evaluation of progress made by the Council to achieve the goals identified under the System Plan;   |  |  |
| (3) identification of Federal and non-Federal assets as determined by the Council that have<br>been integrated into the System, including assets essential to the gathering of required<br>observation data variables necessary to meet the respective missions of Council agencies;   |  |  |
| (4) a review of procurements, planned or initiated, by each Council agency to enhance, expand,<br>or modernize the observation capabilities and data products provided by the System, including<br>data management and communication subsystems;   |  |  |
|  | (5) a summary of the existing gaps in observation infrastructure and monitoring data collection, including— (A) priorities considered by the System advisory committee; (B) the national sea surface current mapping network; (C) coastal buoys; (D) ocean chemistry monitoring; (E) marine sound monitoring; and (F) autonomous underwater and surface vehicle technology gaps;   |  |
| (5) an assessment regarding activities to integrate Federal and non-Federal assets, nationally<br>and on the regional level, and discussion of the performance and effectiveness of regional<br>information coordination entities to coordinate regional observation operations;   | (6) an assessment regarding activities to integrate Federal and non-Federal assets, nationally and on the regional<br>level, and discussion of the performance and effectiveness of regional osestal observing systems to coordinate<br>regional observation operations;   |  |
| (6) a description of benefits of the program to users of data products resulting from the System<br>(including the general public, industries, scientists, resource managers, emergency responders,<br>policy makers, and educators);  |  |  |
| (7) recommendations concerning-  |  |  |
| (A) modifications to the System; and   |  |  |
| (B) funding levels for the System in subsequent fiscal years; and  |  |  |
| (8) the results of a periodic external independent programmatic audit of the System.  SEC. 12308. PUBLIC-PRIVATE USE POLICY.   |  |  |
| SEC. 12308. PUBLIC-PRIVATE USE PULICY.   |  |  |

| The Council shall develop a policy within 6 months after the date of the enactment of this Act that defines processes for making decisions about the roles of the Federal Government, the States, regional information coordination entities, the academic community, and the private sector in providing to end-user communities environmental information, products, technologies, and services related to the System. The Council shall publish the policy in the Federal Register for public comment for a period not less than 60 days. Nothing in this section shall be construed to require changes in policy in effect on the date of enactment of this Act.                 | The Council shall maintain a policy that defines processes for making decisions about the roles of the Federal Government, the States, regional coastal observing systems, the academic community, and the private sector in providing to end-user communities environmental information, products, technologies, and services related to the System. The Administrator shall ensure that National Oceanic and Atmospheric Administration adheres to the decision making process developed by the Council regarding the roles of the Federal Government, the States, the regional coastal observing systems, the academic community, and the private sector in providing end-user communities environmental information, data products, technologies, and services related to the System. |  |
|--|---|--|
| SEC. 12309. INDEPENDENT COST ESTIMATE.   | STRIKE OUT SECTION  |  |
| Within 1 year after the date of enactment of this Act, the Interagency Ocean Observation Committee, through the Administrator and the Director of the National Science Foundation, shall obtain an independent cost estimate for operations and maintenance of existing Federal assets of the System, and planned or anticipated acquisition, operation, and maintenance of new Federal assets for the System, including operation facilities, observation equipment, modeling and software, data management and communication, and other essential components. The independent cost estimate shall be transmitted unabridged and without revision by the Administrator to Congress. | STRIKE OUT SECTION  |  |
| SEC. 12310. INTENT OF CONGRESS.  |   |  |
| It is the intent of Congress that funding provided to agencies of the Council to implement this subtitle shall supplement, and not replace, existing sources of funding for other programs. It is the further intent of Congress that agencies of the Council shall not enter into contracts or agreements for the development or procurement of new Federal assets for the System that are estimated to be in excess of \$250,000,000 in life-cycle costs without first providing adequate notice to Congress and opportunity for review and comment.   |   |  |
| SEC. 12311. AUTHORIZATION OF APPROPRIATIONS.   |   |  |
| There are authorized to be appropriated to the Secretary of Commerce for fiscal years 2009 through 2013 such sums as are necessary to fulfill the purposes of this subtitle and support activities identified in the annual coordinated System budget developed by the Interagency Ocean Observation Committee and submitted to the Congress.  | To fulfill the purposes set forth in section 12302 and to support activities identified in the annual coordinated System budget developed by the Interagency Ocean Observation Committee, there are authorized to be appro- priated to the Secretary of Commerce— (1) \$48,000,000 for fiscal year 2021; (2) \$50,000,000 for fiscal year 2022; (3) \$52,000,000 for fiscal year 2023; (4) \$54,000,000 for fiscal year 2024; and (5) \$56,000,000 for fiscal year 2024;  |  |

|  | IOOS Office Priority for IOOS AC review? H, M, L | IOOC Agency<br>Lead             | Other NOAA or agency lead?                    | Statement of IOOS Office Intent?  | Notes / Details   | How to have IOOS AC Review?  |  |
|--|--|---------------------------------|---|---|---|--|--|
| (i) a national surface current mapping network designed to improve fine scale sea surface mapping using high frequency radar technology and other emerging technologies to address national priorities, including Coast Guard search and rescue operation planning and harmful algal bloom forecasting and detection that (I, II).   | H?   | NOAA                            | COOPS, NOAA/CG                                |   | AC engagement on the vision for HFR   | Discuss with Brian   | refine the<br>priority ratir<br>what are th<br>priorities fo<br>AC |
| (ii) fleet acquisition for unmanned maritime systems for deployment and data integration to fulfill the purposes of this subtitle;   | M/L  |                                 |   |   |   |  |  |
| (iii) an integrative survey program for application of unmanned maritime systems to the real-time or near real-time collection and transmission of sea floor, water column, and sea surface data on biology, chemistry, geology, physics, and hydrography;   | н  | NOAA                            | OMAO  | Help solidify UxS as a tool across the IOOS network to meet multiple mission needs including Gliders, Survace Vessels, etc. | AC can amplify the messages about the importance of this technology for more than hurricanes. Get OMAO buy-in for how regions can contribute to NOAA capabilities. Utilize this to capture biology.   |  |  |
| (iv) remote sensing and data assimilation to develop new analytical methodologies to assimilate data from the System into hydrodynamic models;   | н  | NOAA                            | NASA, Navy, ONR,<br>USGS, NESDIS              |   | DPS is partial to this topic as it aligns with a few contemporaneous activities (Operational Oceanography guidance from SAB; Ocean prediction across timescales (e.g. navigation through resilience); data assimilation as a tool for exploiting the best of both model and observations and to provide feedback on the relative impacts of observations to improve predictions; Coastal coupling between ocean/land hydrology) |  |  |
| (v) integrate multi-State monitoring to assess sources, movement, and fate of sediments in coastal regions;  | L  | USACE and USGS with other NOAA? | NCCOS?  | Welcome coastal processes and sediment experts from other agencies and NOAA to develop workplans within this area.          | Offer to IOOC: USACE and USGS may have interest   | Discuss with John Haines and maybe find USACE rep to guage interest? |  |
| (vi) a multi-region marine sound monitoring system to be— (I) planned in consultation with the Interagency Ocean Observation Committee, the National Oceanic and Atmospheric Administration, the Department of the Navy, and academic research institutions; and (II) developed, installed, and operated in coordination with the National Oceanic and Atmospheric Administration, the Department of the Navy, and academic research institutions; and | M  | NOAA                            | Jason Gedamke<br>(NMFS) Leila Hatch<br>(ONMS) | Help develop cross<br>agency implementation<br>plan with NOAA NMFS as<br>a lead for this.                                   | Possible options to connect to ATN as sound detections related to presence, absence, and movement of animals.   | Gabrielle and Hassan, then Jason Gedamke                             |  |